

# General Environmental Incident Summary

**Incident:** 3749      **Date/Time Notice:** 5/9/2015      1200      **DEM Incident No:**  
**Responsible Party:** BNSF Railway  
**Date Incident:** 5/6/2015      **Time Incident:** 0730      **Duration:** 12 hours  
**County:** Wells      **Twp:** 150      **Rng:** 70      **Sec:** 21      **Qtr:**  
**Lat:** 47.79252      **Long:** -99.64014      **Method:** Interpolation from map  
**Location Description:** Spill occurred at the intersection of CR-1 and the Rail Road tracks, just east of the crossing.

**Submitted By:** Matt Richardson      **Affiliation:** Contractor  
**Address:** 604 7th Street North  
**City:** Wilton      **State:** ND      **Zip:**

## Received By:

**Contact Person:** Greg Jeffries  
80-44th Ave NE  
Minneapolis , MN

**Distance Nearest Occupied Building:** 1000 Feet      **Release Contained:** Yes

**Type of Incident:** Train Derailment

**Description of Released Contaminant:** Crude Oil

**Volume Spilled:** 60000.00 gallons

**Ag Related:** No

**EPA Extremely Hazardous Substance:** Unknown

**Reported to NRC:** Unknown

## Cause of Incident:

Train Derailment

## Risk Evaluation:

No immediate risks to human health.

**# of Fatalities:** 0      **# of Injuries:** 0      **Affected Medium:** 04 - water and soil

## Potential Environmental Impacts:

Soil and Wetland impacted.

## Action Taken or Planned:

Location was immediately boomed with hard boom. Drainage areas were blocked via berms. Excavation, water treatment and sampling are continuing.

**Wastes Disposal Location:** Clean Harbors facility in Sawyer, ND.

## Agencies Involved:

## Updates

**Date:** 5/6/2015     **Status:** Inspection

**Author:** Martin, Russell

### Updated Volume:

#### Notes:

5/6/2015 at 11:45 am., was on location with fellow NDDoH inspector Brady Espe. Met with Fessenden and Harvey fire departments, BNSF and Wenck personnel, as well as other local emergency responders (Wells County sheriff and EMS, etc.), at command post set up south of Heimdal on 44th Ave NE. Railcars were still on fire at the time to the east of town, and smoke was blowing to the northwest. Wenck personnel were conducting air monitoring tests. Heimdal and occupied farms near smoke plume had been evacuated.

We were unable to assess ground/water impacts at site due to the hazards present. Mr. Espe and I went to 46th Ave NE to a water crossing 2 miles downstream of incident site. No sheen visible on waterway at that location. Returned to command post.

Pool fires underneath the railcar tanks were now low enough that we were able to visit the site with Wenck personnel and the EPA on-scene coordinator. Ditch along south side of railbed was visibly impacted, with cattails and other vegetation burnt. There was visible product and sheen on top of the water in the ditch. Winds out of the southeast were keeping the majority of product and sheen next to the incident site to the northwest. Railbed ballast was also blackened, and some rail ties were still smoldering. On the north side, a roughly semicircular area of cattails adjacent to the slough north of the rail line had been burnt, with burning product in the eastern portion of the semi-circle. Response crews at the time were checking the unburnt area for solid ground from which to anchor booms. Returned to command post. Subsequently, a berm was placed in the southside ditch to contain the majority of the product in the ditch close to the incident site, as the southeast winds were expected to shift to the north/northwest. Two sets of booms also were installed on the north side of the railbed around the semi-circular impact area.

5/7/2015 at 8:00, on location with fellow NDDoH inspector Brady Espe. Met with EPA OSC and attended morning meeting at site. Operations for the day were to involve transferring remaining product out of damaged railcars and removal of cars/repair of the rail line afterward. NDDoH would be sampling with Wenck and EPA's START personnel. CTEH would be handling air monitoring. After lunch meeting, we proceeded to sample four sites, two by airboat and two from land. Three of the samples were on the slough north of the rail line and one was in the ditch downgradient from the incident site and booms that had been setup the previous day. Samples taken back to state lab by NDDoH Air Quality personnel who had arrived on-site earlier in the day. Vac trucks deployed to suck up free product/water in southside ditch and northside pools. Recovered liquid placed in frac tanks setup by grain elevator to the northwest of incident site.

5/8/2015 at 7:00, on location with fellow NDDoH inspector Brady Espe. Met with EPA OSC and attended morning meeting at site. Then toured incident site with BNSF and EPA. Vac truck operations had removed enough fluid that a culvert underneath the railbed was discovered, connecting the north slough to the south side ditch. However on further investigation it was determined that the culvert was collapsed and was not communicating fluid from either side of the railbed. Some free product and sheen visible in southside ditch at this time. In impact on northside, vacing operations were continuing (though problems with low suction power due to the length of hose would occur as the operations proceeded). NDDoH and EPA sampled a fifth site along 46th street where observations were previously made back on May 6th. Established these five sites for further sampling by the consultants. Workplans developed from daily to weekly schedules. Discussion on water treatment and possible disposal options for fluid removed from site. Rail line back in service, eagle effigies and colored flags installed to deter birds from landing in impacted areas. NDDoH departed site around 13:00 to return 5th sample to state lab.

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**Date:** 5/9/2015    **Status:** Inspection

**Author:** Espe, Brady

**Updated Volume:**

**Notes:**

I arrived at the site and met with the company personnel and consultants who are working on the cleanup of the spill. They indicated that the distance to the north side of the spill site from where the truck was able to work was too great, and they had started using absorbent pads to soak up the free product. They will be constructing an access on the north side today so the vac truck can reach the impacted area. They are also using absorbent pads and socks on the south side of railroad tracks in the ditch area. It is too muddy for accessing the ditch. The construction company was working on a gravel pad to cut up the rail cars and a gravel pad for the water separator system. They will also construct a gravel road to the ditch so the trucks can get access to free product and so impacted soil can be removed. The plan is to start removing the soil on Monday. Currently, oil is seeping from the impacted soil and the rail bed into the south ditch area. There is a culvert under the track that appears to be collapsed; they have plugged the culvert with absorbent pads and will do a more permanent plug when they can access it with heavy equipment. They will also be doing soil borings on the south side to delineate the impacted area. A couple of borings will be done off the east edge of the constructed pad on the north side. They have contacted the residence to the north; the home is on rural water. There is also a well at the house that will be sampled. They will be meeting with the renters of the field, where the tanks and separator will be located, to review the future plans. They will also be walking the field and rail tracks to look for metal debris.

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**Date:** 5/10/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

5/10/2015 at 8:45, on location. Met with EPA OSC and site personnel and toured site. Pad on south side established to station equipment for future water treating and rail car dismantling. On north side, cleanup by hand is continuing due to issues with vac equipment. Ramp is being built on the north side to allow equipment to get closer to impact. Tenants for field (where rail cars are currently sitting) have visited the site.

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**Date:** 5/11/2015    **Status:** Reviewed - Follow-up Required

**Author:** Stockdill, Scott

**Updated Volume:**

**Notes:**

This incident released a large volume of crude oil into the environment. NDDoH staff were on site Wednesday May 6. Followup is necessary.

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**Date:** 5/11/2015    **Status:** Inspection

**Author:** Kangas, Kathleen

**Updated Volume:**

**Notes:**

On site at approximately 5:15 p.m. and met with company representatives. Work continues on removal of oil from impacted areas on both sides of the track. Contaminated soil started being hauled out on 05/12/15 to a permitted landfill, and water will be cleaned on site with mobile equipment. Pad for wrecked tanker cars is being built on the south side of the tracks, and crews continue to work on the north side with a vac truck to clean impacted water/soil/slough. On the south side of the tracks, water has been contained with multiple berms placed parallel to the tracks. Boom is in place both north and south of tracks. More cleanup and followup is required.

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**Date:** 5/15/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

5/15/2015 at 12:16, on location. Met with site personnel. Excavating equipment awaiting weekend rains to pass; planning to begin work next Monday. Water treatment equipment on site but not currently set up. On south side, monitoring wells installed and roadway off of pad installed for excavation operations of ditch. Sheen visible in remaining ditch water. Ramp built on north side. Cleanup currently going on by hand with manual application of absorbent pads due to rail operations. Small sheet wall installed in impacted area on north side to supplement booms.

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**Date:** 5/27/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Received information packet from consultants with the 7-day plans for May 16-22 and 23-29. The location is on week-long plans starting Saturday at 7 a.m. for each week. Discussed need for more tangible information instead of just verbal updates. NDDoH is now being copied on the daily email updates going to BNSF from the consultants. Received daily progress report for May 23.

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**Date:** 5/28/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Received test results from water samples collected by consulting company and progress report for May 27.

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**Date:** 5/29/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Received daily progress report for May 28.  
Running totals to date:  
925 tons of soil removed to Sawyer disposal.  
590 gallons of oil recovered by pumping and skimming operations.  
133,100 gallons of wastewater treated.

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**Date:** 6/4/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

6/4/2015 at 17:00, on location. Met with consultants and site personnel and toured site. Water treatment system in operation. Piezometers on south side of rail line still have some oil according to consultants. Likewise, the south-side ditch still has some visible sheen as expected, with remaining oil coming out of the railbed before being removed via water treatment. South- side ditch still has multiple booms and earthen berms to keep remaining oil contained. On the north side, the area has been divided up with clay berms and one sheetpile wall to separate out the most heavily impacted areas from the slough to the north (boom further out from berms also still in place). Regular rainfall has complicated the work as areas drained of liquid refill before they can dry out and be excavated. In the area adjacent to the north side of the rail line, a hose has been installed underneath the rail line allowing the water treatment system (set up on a pad by the south side ditch) to remove water from the north side as well.

Additionally, daily progress reports have been received periodically for work on 5/29, and 6/1-6/3.

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**Date:** 6/12/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Since the last update on 6/4/2015, daily status updates for 6/5/2015 to 6/10/2015 have been received. Running totals to date:  
1780 tons soil removed  
706 gallons of oil recovered from pumping and skimming  
198,600 gallons of wastewater treated.

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**Date:** 6/15/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

6/15/2015 at 17:00, on location. Visited site before incident debriefing session, met with consultants and responsible party personnel. Most of the metal cut from the tanks has been removed. Vegetation in burnt areas is starting to regrow in spots, most noticeably in the southside ditch, where cattails are growing on either side of the rig mat road installed along the ditch. Sheen still visible on either side of railroad bed in contained/bermed water. Daily reports being consolidated into biweekly reports, coming out Tuesday and Friday. Reports received via email covering previous work.

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**Date:** 6/26/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

6/26/2015 at 12:13, on location. Inspected site, some sheen visible on the contained/bermed water. Vegetation continuing to regrow. Reports received via email covering previous work.

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**Date:** 7/17/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

7/17/2015 at 15:09, on location. Site personnel currently deployed to Montana for derailment there. Vegetation regrowing within southside ditch, some sheen still visible in parts of the ditch. On northside, new vegetation also growing in impacted area, but not to the same extent as in the ditch. Sheen also visible in the pools on the northside. Checked farmer's field to the south of pad installed for the water treatment and railcar cutting, two pieces of metal found off of pad in field. Additionally, reports received bi-weekly over the past month covering work completed.

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**Date:** 7/29/2015    **Status:** Awaiting Documentation

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Planning session with BNSF and consulting firm to determine steps moving forward for the site. Summary letter and environmental data package placed in report folder.

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**Date:** 8/5/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Received work plan for bioremediation along with monitoring plan. Additionally, bi-weekly updates received up to this date.

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**Date:** 8/7/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

8/7/2015 at 10:27, on location. Site is drying out, south side ditch within clay berm has only a few inches of water in it. Oil line visible on ballast and clay berms from high water mark. Outside of the clay berm, further to the east, the ditch has no standing water. Vegetation is starting to regrow throughout the south side area. Similarly on the north side, only the areas closest to the rail bed still has water present. On the north side, staining visible on the clay berms, as well as within the sheet metal wall area and the closest clay berm area next to the impacted railbed ballast.

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**Date:** 8/28/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Weekly status updates for site received for the past month. Reporting schedule will be decreased to every other week due to reduction in site activities.

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**Date:** 9/18/2015    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

9/18/2015 at 13:15, on location. Met with site personnel and toured site. On south side, vegetation starting to regrow where the temporary mat road was taken out. Staining still visible on inside of clay berms in south ditch, but ditch is completely dry now, no standing water visible. North side also dry except for the remaining bermed area right along the ballast. North side outside of the berm also scraped, vegetation starting to grow in scattered spots. Within bermed area on northside, still some staining on the ballast and sheen visible on the water, but is all contained within the berm. No pumping occurred during the inspection, but talked with personnel and they will make sure to pump out water contained in berm before it gets too high and risks overtopping the berm. Outer containment booms still in place around perimeter of site on both north and south sides.

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**Date:** 10/5/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Weekly status updates for site received for the past month. To date: 2439.39 tons of soil removed, 18.88 tons of absorbent material removed. 4273 gallons of oil estimated to have been recovered from the absorbent material, 836 gallons removed via skimming and pumping. 416,400 gallons of water pumped through the wastewater treatment system.

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**Date:** 11/2/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Bi-weekly status updates for the site received for the past month. To date: 2439.39 tons of soil removed, 836 gallons of oil removed via skimming and pumping. 432,400 gallons of water pumped through the wastewater treatment system. Compliance samples taken from the treatment system and the bio-application area. Next work period includes finalizing the site and preparing the treatment system for the winter shutdown.

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**Date:** 12/15/2015    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Correspondence with site consultants. No further bi-weekly updates as the site has been readied for winter. Water treatment system has been dismantled, and frac tanks on site have been emptied and cleaned. Other general site cleanup has also occurred. The results of the bio-application are currently being evaluated. The results, as well as possible workplans for spring, will be submitted to the NDDoH when finalized.

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**Date:** 5/6/2016    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Email from consultants about the site. Some weathered crude seeped out during the spring thaw into the bermed containment area. This has been pumped out and placed into the frac tanks on site. A second bio-application is planned for early this summer, and the additional monitoring that will go with it will be combined with the report for last year's work. No oil or sheen found outside the containment berm, and vegetation is quickly returning in the area.

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**Date:** 6/8/2016    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

6/8/2016 at 09:30, on location. Met with responsible party, consultant, and EPA personnel. Toured site and reviewed actions taken to date. Single frac tank onsite (for when water needs to be pumped from the containment). Vegetation continues to regrow on both sides, on the north side the area outside of the containment berm has re-flooded (area dried up last summer), water grasses are visibly growing here. No sheen visible outside of the containment. Second bio-application has not been applied yet, but the plan is to still apply it sometime this summer.

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**Date:** 8/5/2016    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Received report with results from the monitoring and remediation that has occurred up to this date, as well as proposed further work.

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**Date:** 10/19/2016    **Status:** Correspondence

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

Email with responsible party and consultants. Monitoring wells and much of the southern infrastructure to be dismantled after the results of year-long monitoring. South side bio-monitoring well and south trench, as well as most of the infrastructure on the north side, will remain. The only thing to be removed on the north side will be the temporary boom deployed during the initial response.

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**Date:** 12/2/2016    **Status:** Inspection

**Author:** Martin, Russell

**Updated Volume:**

**Notes:**

12/2/2016 at 12:45, on location. Met with consultant and toured site. Currently, site is covered in snow. Evidence of work done to remove infrastructure on the south side, some of the rig-mat road has been pulled up and is currently stacked in a pile. One storage tank remains on-site. No visible staining on the ice or snow, and new vegetation from reseeding efforts are currently dormant.